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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/021,000	12/19/2001	Nobuo Takeshita	2257-0202P-SP	8807

2292 7590 06/20/2006

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EXAMINER	
CHU, KIM KWOK	

ART UNIT	PAPER NUMBER
2627	

DATE MAILED: 06/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/021,000	TAKESHITA, NOBUO	
	Examiner	Art Unit	
	Kim-Kwok CHU	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *Three* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *Remarks filed on April 4, 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1-4 and 6-11* is/are allowed.

6)☒ Claim(s) *5,12 and 14* is/are rejected.

7)☒ Claim(s) *13 and 15-19* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *1/26/2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Remarks

1. Applicant's Amendment filed on April 4, 2006 has been fully considered but it is not persuasive.

With respect to the rejected claim 5, Applicant states the prior art of Wakabayashi "merely uses this maximum inclination angle θ is used for calculating an appropriate length of the guide bearing 5" (page 3 of the Remarks, second last paragraph). Accordingly, the prior art of Wakabayashi teaches that a lens holder 2 can be inclined with an angle θ within a guide bearing 5 because the guide bearing 5 has a larger bearing hole to fit the smaller shaft of the lens holder 2. During a tracking operation, the external acceleration force for tracking applied to Wakabayashi's lens holder 2 will cause it to incline within the limit (angle θ) of the guide bearing 5. In other words, besides the tracking direction A turns the lens holder 2 around an vertical axis while focusing in a vertical direction B, the prior art of Wakabayashi's tracking driving means also cause the lens holder 2 to slant within an angle θ under an external acceleration force which is generated by tracking information.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> *(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.*

3. Claims 5, 12 and 14 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Wakabayashi et al. (U.S. Patent 5,319,497) in view of Oinoue et al. (U.S. Patent 6,044,048).

Wakabayashi teaches an optical head very similar to that of the instant invention as recited in claim 5. For example, Wakabayashi teaches the following:

(a) as in claim 5, an objective lens 1 for bringing light into focus (Fig. 4);

(b) as in claim 5, a lens holder 2 for holding the objective lens 1 (Fig. 4);

(c) as in claim 5, the lens holder 2 having a bearing hole formed along a direction parallel to an optical axis 11a of the objective lens 1 (Fig. 4; a bearing hole to fit a support shaft is an inherent feature in this type of lens drive

device so that the lens holder 2 can be rotated; column 1, lines 25-29);

(d) as in claim 5, a support shaft inserted in the bearing hole (Figs. 2; line 0a shows a support shaft);

(e) as in claim 5, an inclination drive unit (lens drive coils and magnets) for, according to the information about the inclination, turning the lens holder 2 on a first axis perpendicular (horizontally, incline or slant) to the support shaft (Figs. 4 and 5; coils and magnets generates the driving force and accelerating force which turns/rotates the lens holder 2 in the direction θ which is perpendicular to the vertical axis 11a);

(f) as in claim 5, the inclination drive unit includes an electromagnetic drive means 3a, 3b, 7a, 7b, 8a and 8b (Fig. 4);

(g) as in claim 5, the electromagnetic drive means comprising a first element 3a mounted on the lens holder 2 on a second axis perpendicular to both the support shaft and the first axis perpendicular to the support shaft (Fig. 4; magnets 3a are positioned in another axis which is not in the same direction as the support shaft and the first axis);

(h) as in claim 5, a second element 3b located opposite to the first element 3a (Figs. 4); and

(i) as in claim 5, a magnetic material (additional permanent magnets), fixedly mounted on the lens holder 2 in

close vicinity to the second element 3b of the electromagnetic drive means (Fig. 4; at least two magnets besides 3a and 3b form the electromagnetic drive means; column 2, lines 2, lines 40-45).

However, Wakabayashi does not teach the following:

(a) as in claim 5, a light emitted from a light source;

(b) as in claim 5, an information recording medium where light is being focused on; and

(c) as in claim 5, a light detector for receiving the light reflected from the information recording medium and outputting information about inclination of the objective lens relative to the information recording medium on the basis of the light received.

Oinoue teaches the following:

(a) a light emitted from a light source 21 (Fig. 3);

(b) an information recording medium 11 where light is being focused on (Fig. 6); and

(c) a light detector 27 for receiving the light reflected from the information recording medium 11 and outputting information about inclination (servo movements) of the objective lens relative to the information recording medium 11 on the basis of the light received (Figs. 5 and 6).

An objective lens unit used in an optical information read/write system requires a light source, a light detector and

a recording medium. In this case, although Wakabayashi's lens drive device does not include the above necessary components to form the optical information read/write system, it would have been obvious to one of ordinary skill in the art to add such components to the objective lens unit similar to Oinoue's, because Wakabayashi's objective lens is used to focus a light beam on the recording medium to read/write information. The focused light beam is reflected and detected by the light detector so that the recorded information and the servo signals can be processed by the information read/write system.

4. Claims 12 and 14 have limitations similar to those treated in the above rejection, and are met by the reference as discussed above. Claim 14 however also recites the following limitation which is also taught in the prior art of Wakabayashi:

As in claim 14, a tracking drive unit 3a, 3b, at least part of the tracking drive unit being arranged on the first axis (Figs. 4 and 5; magnets 3a and 3b arranged/surrounded on the first axis are part of the tracking drive unit).

Allowable Subject Matter

5. Claims 1-4 and 6-11 are allowable over prior art.

6. Claims 13 and 15-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is an Examiner's statement of reasons for the indication of allowable subject matter:

As in claims 1 and 9, the prior art of record fails to teach or fairly suggests that the bearing hole having a diameter that increases while approaching the bearing hole's openings from the bearing hole's center.

As in claim 13, the prior art of record fails to teach or fairly suggests that a focusing drive unit including a coil wound around the support shaft.

As in claim 15, the prior art of record fails to teach or fairly suggests that the inclination drive unit includes a pair of coils arranged on the second axis on either side of the support axis.

As in claim 18, the prior art of record fails to teach or fairly suggests the following features:

(a) the inclination drive unit includes a pair of coils mounted on the lens holder, such that the coils are arranged on the second axis on either side of the support axis; and

(b) a pair of magnets mounted on the base, such that the magnets are arranged on the second axis on either side of the support axis.

The features indicated above, in combination with the other elements of the claims, are not anticipated by, nor made obvious over, the prior art of record.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lee (5,724,324) is pertinent because Lee teaches an optical lens holder which is suspended on a spring.

Kobayashi et al. (5,488,594) is pertinent because Kobayashi teaches an optical head having an objective lens holder inclination adjusting means.

Ichikawa et al. (4,838,649) is pertinent because Ichikawa teaches an optical lens holder using a support spring to prevent the lens inclination under tracking acceleration force.

9. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action

10. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Kim CHU whose telephone number is (571) 272-7585 between 9:30 am to 6:00 pm, Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch, can be reached on (57) 272-7589.

The fax number is:
(571) 273-8300 (for formal communications intended for entry. Or:
(571) 273-7585, (for informal or draft communications, please label "PROPOSED" or "DRAFT").

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished application is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9191 (toll free).

THANG V. TRAN
PRIMARY EXAMINER

Kim-Kwok CHU

Examiner AU2627
June 16, 2006
(571) 272-7585 6/16/06